

WHAT IS CLAIMED IS:

1. A method for producing asphaltic foam comprising the steps of:
providing an asphalt;
liquefying said asphalt;
adding to said asphalt one or more isocyanates, thereby forming a first intermediate mixture;
bringing the temperature of said first intermediate mixture to between about 120°F and 170°F;
forming a second intermediate mixture comprising one or more polyols, a blowing agent, and a surfactant; and
mixing said first intermediate mixture with said second intermediate mixture, thereby forming a final reaction mixture, wherein said first intermediate mixture and said second intermediate mixture react to form said asphaltic foam.
2. The method of Claim 1, wherein the asphalt comprises the following components:
about 12-13% by weight asphaltene;
about 9-12% by weight saturated hydrocarbons;
about 38-44% by weight polar components; and
about 35-38% by weight naphthalene aromatic constituents.
3. The method of Claim 1, wherein the second intermediate mixture comprises at least one additional ingredient selected from the group consisting of catalyst and fire retardant.
4. The method of Claim 1, wherein the surfactant is a silicone surfactant.
5. The method of Claim 3, wherein the catalyst is a curing catalyst.
6. The method of Claim 3, wherein the fire retardant is TCPP.
7. The method of Claim 1, wherein the isocyanate is polymeric methylene diphenyl diisocyanate (MDI).
8. The method of Claim 1, wherein the first intermediate mixture comprises about 1:1 to about 1.5:1 polyisocyanate:asphalt.
9. The method of Claim 1, wherein the polyol is an amino-based polyol.

10. The method of Claim 1, wherein the blowing agent is selected from the group consisting of water, halocarbons, and mixture of ethanol and dibutylphthalate.
11. A method of forming a ridge cap or roofing tile comprising the steps of:
 - providing a conveyor belt;
 - applying a granule layer to said conveyor belt;
 - providing a mold with a top side open;
 - filling the mold with a reaction mixture produced by a method of Claim 1;
 - applying the mold with the open side down on said granule layer; and
 - curing the asphaltic foam; thereby forming the ridge cap or roofing tile.
12. The method of Claim 11, additionally comprising the step of forming an indentation on said granule layer after applying the granule layer on said conveyor belt.
13. The method of Claim 11, additionally comprising the step of applying a second granule layer having a contrasting color compared to the color of said first granule layer.
14. The method of Claim 11, wherein said mold comprises an indentation.
15. The method of Claim 11, further comprising applying a strip of modified asphalt onto the granule layer before applying the asphaltic foam.
16. The method of Claim 15, further comprising applying a fire resistant roofing underlayment onto the strip of modified asphalt.
17. The method of Claim 16, wherein the fire resistant roofing underlayment is a coated substrate product with fire-resistant qualities.
18. The method of Claim 11, wherein the second intermediate mixture comprises at least one additional ingredient selected from the group consisting of catalyst and fire retardant.
19. The method of Claim 18, wherein the catalyst is a curing catalyst.
20. The method of Claim 11, wherein the surfactant is a silicone surfactant.
21. The method of Claim 11, wherein the isocyanate is polymeric methylene diphenyl diisocyanate (MDI).
22. The method of Claim 11, wherein the first intermediate mixture comprises about 1:1 to about 1.5:1 polyisocyanate:asphalt.

23. The method of Claim 11, wherein the polyol is an amino-based polyol.
24. The method of Claim 11, wherein the blowing agent is selected from the group consisting of water, halocarbons, and mixture of ethanol and dibutylphthalate.